

WE CLAIM:

1. An input device for scrolling an image relative to an image display screen along perpendicular axes, said device comprising:
 - a housing having at least one opening; and
 - a scroll wheel assembly provided within said housing, said scroll wheel assembly including a rotatable member that is positioned within said opening, said rotatable member being rotatable about a first axis extending within said housing and said rotatable member being pivotally movable about a second axis within said opening, said first axis and said second axis being perpendicular to each other; and a movement sensing system configured sensing rotational movement of said rotatable member about said first axis; and the movement sensing system configured to sense pressure applied to said rotatable member for said pivotal movement.
2. The input device according to claim 1, wherein said rotatable member is laterally movable along said axis within said opening.
3. The input device according to claim 1, wherein said rotatable member includes a finger-engagable control member.
4. The input device according to claim 1, wherein the scroll wheel assembly includes a shaft member extending along said first axis and said rotatable member is coupled to said shaft

member, said shaft member and said rotatable member being pivotally movable about said second axis together.

5. The input device according to claim 1, wherein said scroll wheel assembly includes a support member configured for supporting said shaft, said support member being pivotally movable about said second axis.
6. The input device according to claim 4, further including a shaft supporting system that permits said shaft member and said rotatable member to float within said housing.
7. The input device according to claim 6, wherein said shaft supporting system includes a pair of arms, each said arms being positioned for supporting a portion of said shaft, and a resilient member positioned between each said cradle and said housing for supporting a respective one of said cradles within said housing.
8. The input device according to claim 1, wherein said scroll wheel assembly includes a bracket that pivots when said rotatable member is moved laterally relative to said opening.
9. A method of scrolling an image relative to a display screen using an input device having a housing and a member that is rotatable and pivotal relative to the housing, said method comprising the steps of:

receiving input for pivotally moving the rotatable member relative to a plane in

which said member is rotatable;

sensing relative changes in lateral pressure applied to the member; and

controlling a rate of scrolling of an image on the display screen responsive the step of sensing.

10. The method of scrolling as recited in claim 9, wherein said step of pivotally moving the rotatable member includes the step of pivoting the rotatable member about an axis that extends parallel to said plane.
11. The method of scrolling as recited in claim 9, wherein said step of pivotally moving includes the step of applying pressure to a surface of the rotatable member.
12. The method of scrolling as recited in claim 9, wherein said controlling step includes horizontally scrolling the image in response to the pivotally moving step; and wherein said method further includes the step of vertically scrolling the image in response to rotation of the rotatable member.
13. An electronic input device configured for scrolling of an image relative to a display screen in first and second perpendicular scrolling directions comprising:
 - a housing;
 - a scroll wheel being rotatable relative to the housing about an axis to cause scrolling of the image in the first direction, and said scrolling wheel being pivotally displaceable relative to the housing to cause scrolling of the image in the second direction

perpendicular to the first direction.

14. The electronic input device according to claim 13, wherein said electronic input device is configured to provide a signal corresponding to vertical scrolling of an image in said first direction when said rotatable member is rotated about the axis and to provide a signal corresponding to horizontal scrolling in said second direction of an image when said rotatable member is pivotally displaced relative to the housing.
15. The electronic input device according to claim 13, wherein said computer input device is a computer mouse.
16. The electronic input device according to claim 13, wherein said computer input device is a keyboard.
17. A peripheral electronic input device for scrolling an image across a display screen in perpendicular directions, said device comprising:
a housing;
a scroll wheel assembly, said scroll wheel assembly including a rotatable member that is laterally movable relative to said housing, and a sensor positioned within said housing for sensing lateral movement of the rotatable member; the sensor including at least one linear extendable member which is engageable with the rotatable member so as to provide a rate of change of said lateral movement; and
a sensing system coupled to said sensor, said sensing system being configured to generate

a signal to scroll the image across the display screen.

18. The input device according to claim 17, wherein said rotatable member is laterally movable along a shaft extending within said opening.
19. The input device according to claim 17, wherein said sensing system is configured to provide a signal corresponding to vertical scrolling of an image when said rotatable member is rotated about an axis and to provide a signal corresponding to horizontal scrolling when said rotatable member is laterally moved relative to the housing based on said sensor.
20. The input device according to claim 19, further comprising a support member assembly pivotable with the rotatable member, said supporting member assembly including laterally extending arms, wherein said sensing system is configured to contact opposing lateral sides of the support member when the rotatable member is moved laterally.